

LIST OF CURRENT CLAIMS

1. (Currently Amended) A method for determining the limpness of sheet material (BN), in particular bank notes (BN), comprising the steps:

- [[[-]]] irradiating the sheet material (BN) with sound waves,
- [[[-]]] measuring the sound waves emanating from the irradiated sheet material (BN),
- [[[-]]] determining the limpness of the sheet material (BN) on the basis of the measured sound waves,

~~characterized in that wherein~~

both sound waves ~~those reflected by the sheet material (BN) and those transmitted by the sheet material~~ are measured, and forming a mathematical ratio of the reflected and the transmitted sound waves ~~is formed~~, in order to determine the limpness.

2. (Currently Amended) The method according to claim 1, wherein characterized in that the measuring of the reflected and the transmitted sound waves is taken from a common place (6) on the sheet material (BN).

3. (Currently Amended) The method according to claim 1, wherein any of the above claims, characterized in that a measure for ~~another~~ a property of the sheet material other than the limpness, such as e.g. the nominal value of the sheet material, the weight per unit area and/or the degree of soiling of the sheet material (BN), is determined and is taken into consideration when determining the limpness.

4. (Currently Amended) The method according to claim 1, wherein any of the above claims, characterized in that a measure for of the sound waves irradiating the sheet material (BN) is measured obtained and taken into consideration when forming the ratio for determining the limpness.

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5. (Currently Amended) The method according to claim 1, wherein ~~any of the above claims, characterized in that~~ the frequency spectrum of the sound waves is measured and taken into consideration when determining the limpness.
6. (Currently Amended) The method according to claim 1, wherein ~~any of the above claims, characterized in that~~ the transit time of sound waves in the sheet material (BN) is measured and taken into consideration when determining the limpness.
7. (Currently Amended) The method according to claim 6, wherein, ~~any of the above claims, characterized in that~~ for determining the transit time of sound waves in the sheet material, (BN) a measurement measuring, in particular an optical measuring, of the deflection (A) of the sheet material (BN) is carried out.
8. (Currently Amended) The method according to claim 1, wherein ~~any of the above claims, characterized in that~~ defective areas of the sheet material are determined and these areas are not taken into consideration when determining the limpness.
9. (Currently Amended) The method according to claim 1, wherein at least one of the steps of ~~any of the above claims, characterized in that~~ the excitation of the sheet material and/or and the measuring of the sound waves emanating from the sheet material is carried out in a contacting fashion.
10. (Currently Amended) An apparatus (1, 1') for determining the limpness of sheet material (BN), in particular bank notes (BN), having comprising:
 - [[[-]]] a source of sound (2, 2') for irradiating the sheet material (BN) with sound waves,
 - [[[-]]] a measuring device (3, 4) for measuring the sound waves[[,]] which emanate from the irradiated sheet material (BN),
 - [[[-]]] an evaluation unit (5) for determining the limpness of the sheet material (BN) on the basis of the sound waves captured by the measuring device (3, 4),

characterized in that wherein

the measuring device (3, 4) has both a reflection sensor (3) for measuring the sound waves reflected by the sheet material (BN), and a transmission sensor (4) for measuring the sound waves transmitted through the sheet material (BN), and further wherein the evaluation unit(5) is adapted arranged to form a mathematical ratio of the reflected and transmitted sound waves measured, in order said mathematical ratio being usable to determine the limpness.

11. (Currently Amended) The apparatus according to claim 10, wherein characterized in that the evaluation unit (5) is adapted arranged to form a mathematical ratio of the reflected and the transmitted sound waves emanating from a common place (6, 6') of on the sheet material (BN), in order to determine the limpness.

12. (Currently Amended) The apparatus according to claim 10, wherein at least one of the claims 10 or 11, characterized in that the measuring device (3, 4) has comprises a broadband microphone (3, 4), in order to determine the frequency spectrum of the captured sound waves.

13. (Currently Amended) The apparatus according to claim 10, wherein said at least one of the claims 10 to 12, characterized in that the measuring device (3, 4, 7) has comprises a unit (7) for determining the transit time of sound waves in the sheet material (BN).

14. (Currently Amended) The apparatus according to claim 10, wherein said at least one of the claims 10 to 13, characterized in that the measuring device comprises (3, 4, 7) has a unit (7) for determining a another property of the sheet material other than the limpness, such as e.g. the nominal value of the sheet material, the weight per unit area and/or the degree of soiling of the sheet material (BN).

15. (Currently Amended) The apparatus according to claim 10, wherein at least one of at least one of the claims 10 to 14, characterized in that the source of sound (2, 2") and/or and the measuring device (3, 4) is in contact with the sheet material (BN) to be measured.

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16. (New) The method according to claim 1, wherein the property of the sheet material other than the limpness that is determined as selected from the group consisting of the nominal value of the sheet material; the weight per unit area of the sheet material; and the degree of soiling of the sheet material.

17. (New) The apparatus according to claim 14, wherein said unit for determining a property of the sheet material other than the limpness is selected from the group consisting of the nominal value of the sheet material; the weight per unit area of the sheet material; and the degree of soiling of the sheet material.